STUDENT STRATEGIES FOR IMPROVING THE QUALITY OF ENGLISH SCIENTIFIC PAPERS

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ABSTRACT

This study aims to explore student strategies for improving the quality of English-language scientific work. The approach used is a descriptive qualitative approach with primary data from in-depth interviews with 5 UIN Sunan Kalijaga Postgraduate students who have published English-language scientific papers in reputable journals, while secondary data are obtained from literature studies of literature relevant to the research topic. The results of this study show that the strategies used by students include 3 stages, namely: 1) Planning, which includes determining problem issues, research objectives, conceptual framework, research methodology, and research procedures. 2) Preparation of scientific papers, which includes selecting reputable journal portals, creating a frame of mind, managing finding and reference data, and correcting substances, grammar, and paragraph structure. 3) Translation, which includes strategies to improve the ability to translate scientific papers, the use of machine translation and grammar checkers, and finally feedback from English linguists to improve the quality of translation. This research provides important insights into students' efforts to improve the quality of English-language scientific work and its implications for the development of more effective teaching methods.

Keywords: Writing Strategy, Improving the Quality of Scientific Work, English Scientific Paper.

ABSTRAK

Penelitian ini bertujuan untuk mengeksplorasi strategi mahasiswa dalam meningkatkan kualitas karya ilmiah berbahasa Inggris. Pendekatan yang digunakan adalah pendekatan kualitatif deskriptif dengan data primer dari wawancara mendalam dengan 5 mahasiswa Pascasarjana UIN Sunan Kalijaga yang pernah mempublikasi karya ilmiah berbahasa Inggris pada jurnal bereputasi, sedangkan data sekunder diperoleh dari studi literatur terhadap literatur yang relevan dengan topik penelitian. Hasil penelitian ini menunjukkan bahwa strategi yang digunakan para mahasiswa meliputi 3 tahapan, yaitu: 1) Perencanaan, yang meliputi penentuan isu permasalahan, tujuan penelitian, kerangka konseptual, metodologi penelitian, dan prosedur penelitian. 2) Penyusunan karya ilmiah, yang meliputi pemilihan portal jurnal bereputasi, membuat kerangka berpikir, mengelola data temuan dan referensi, mengoreksi subtansi, tata bahasa dan struktur paragraf. 3) Penerjemahan, yang meliputi strategi meningkatkan kemampuan untuk penerjemahan karya ilmiah, pemanfaatan mesin penerjemah dan grammar checker, dan terakhir adalah umpan balik dari ahli bahasa Inggris untuk menyempurnakan kualitas penerjemahan. Penelitian ini memberikan wawasan penting tentang upaya mahasiswa dalam meningkatkan kualitas karya ilmiah berbahasa Inggris dan implikasinya bagi pengembangan metode pengajaran yang lebih efektif.

Kata Kunci: Strategi Menulis, Meningkatkan Kualitas Karya Ilmiah, Karya Ilmiah Berbahasa Inggris,

INTRODUCTION

Special attention to strategies in improving the quality of English-language scientific work is needed for students as academics and also to support global knowledge exchange. Not only for academic purposes but also very important to increase the credibility of the university

where the student studies (Jamil, 2021). In general, strategy is a long-term plan to achieve goals (Arifudin et al., 2020). Jackson's perspective adds that strategy is a plan, a way, and a means to get us from one point to an intended point, simply strategy is a way to achieve goals (Yunus, 2016). Strategy is needed in the preparation of scientific papers because the preparation of scientific papers should be written systematically, logically, and supported by data that is tested for validity (Zulmiyetri et al., 2020). A quality scientific work should be logical with acceptable arguments and the facts presented should be objective. Scientific work must also be written clearly, and carefully, and not contain doubts or multiple interpretations (Haryanto et al., 2000; Indrastuti, 2018). Rahmawati et. al. (2019) in their research found that the use of high-frequency writing strategies by considering confidence, awareness, language proficiency, writing time, and writing activity environment can provide benefits in achieving quality writing results. Thus, the application of appropriate strategies in writing English-language scientific papers is crucial to ensure their success and quality in supporting academic goals and contributing to the global scale of knowledge.

The ability to produce quality scientific work is needed by students so that their research results can be published in reputable national and international journals (Darmalaksana & Busro, 2021; Saputri & Hartono, 2022). The higher the journal's reputation, the more complex author guidelines it will require, one of which is the obligation to use international languages such as the English language in order to reach a wider audience in various parts of the world (Purwanto et al., 2020). But nowadays there are still many students who think that writing scientific papers is a difficult thing. Among the reasons is the lack of awareness of the importance of writing scientific papers and a lack of understanding the strategy of writing good and correct scientific papers (Nurgiansah, 2020; Saputri & Hartono, 2022). Therefore, mastery of writing strategies is needed to be able to produce quality English-language scientific work.

Writing scientific papers will feel easy for someone who is used to writing, but it will be difficult for those who are not used to doing it, especially if the scientific work is in English or other international languages, it will certainly be a challenge for a researcher who is not a native speaker of the language (Winarto, 2021). Therefore, the right strategy is needed to improve the quality of scientific work in English which is beneficial for the development of scientific treasures globally. As for the things included in the writing strategy according to Saputri &; Hartono, (2022) is mastery of the rhetoric of the variety of data and references to be used, following ethics in applicable writing, and understanding the style of journal or media that is

chosen. Journal style itself is a typical style of journals that are fixed and consistent, such as the style of appearance and writing that is usually used as the standard for writing the journal (Tanjung & Arifudin, 2023). In addition, the process of translating scientific papers into English also requires the right strategy, the use of machine translation can help translate scientific papers efficiently but note that researchers still have to double-check the translation results to people who are more experts in English translation because machine translation has not been able to replace the role of humans as ideal translators (Jufriadi et al., 2022).

There are several previous studies relevant to this study. First, Widyasari &Sholihah's research on Academic Writing Teaching Strategies to *Improve the Quality of Student Scientific Work in the Department of English Language Education, Widya Dharma Klaten University,* which discusses how to teach Academic Writing strategies to improve the quality of scientific work. The results of the study show that the strategies used can provide significant understanding but take a long time (Widyasari & Sholihah, 2018). In the study, a gap was found in the absence of discussion on how student strategies improve the quality of their scientific work after learning *Academic Writing.* This research will fill the research gap by reviewing student strategies for improving the quality of their scientific work.

Second, Jabri & Ismail's research on the Impact of *Peer Review* and *Lecturer Corrective Feedback* on Student Scientific Article Writing Performance. The results of the study show that *Peer Review and* Lecturer Corrective Feedback *are important and can have a positive and useful impact on writing student scientific papers* (Jabri & Ismail, 2021). This research will add insight into that research by focusing on discussing strategies used by students in utilizing the results of peer assessment to improve the quality of English-language scientific work.

Third, research by Zainuddin et al. on Improving the Quality of Scientific Work with *Digital Literacy Workshops* (Mendeley, Publish, Perish, and Grammarly) which discusses training related to the technical use of Mendeley, Publish, Perish, and Grammarly applications to improve the quality of scientific work. The results of the study show that through this training students can be more productive, accurate, and reliable in compiling scientific papers by mastering these applications (Zainuddin et al., 2023). The use of the Grammarly application can help students detect English grammar errors in scientific papers. This research will further analyze the ways and strategies of students facing the challenges of translation in making scientific papers in English, both using the Grammarly application and other applications.

This study aims to understand and analyze what students prepare in planning the preparation of scientific papers in English, analyze the strategies they use in dealing with the complexity of writing scientific papers, and analyze how they face obstacles to translating scientific papers into English. Based on the objectives of the study, researchers will explore concrete strategies used by students in designing, developing, and polishing their English-language scientific papers. Primary data obtained from in-depth interviews with students from various scientific disciplines as well as secondary data derived from a review of documents in the form of relevant previous scientific papers will be integrated into this research to provide deep insight into the role of the strategies they use in improving the quality of English-language scientific papers. That way, this research has the potential to be a practical guide for students who want to improve the quality of writing scientific papers in English so that they can make a significant contribution to science in the era of globalization..

METHOD

The type of this research is *field research* with a descriptive qualitative approach that aims to describe student strategies for improving the quality of scientific work in English. Especially, to analyze the application of strategies by students which include designing, developing, and polishing the quality of English-language scientific work. The primary data used in this research came from observation and interviews with students who had backgrounds from various disciplines to gain deep insights, while the secondary data used were *literature studies* of scientific works that could support and complement research data in the form of books, journal articles, and research reports.

The main subjects in this study are 5 postgraduate students at Sunan Kalijaga State Islamic University Yogyakarta who should publish scientific papers as a condition for assessing certain courses they take and also as a condition for graduation. Informants were selected using *non-probability sampling techniques* with *purposive sampling methods.* Researchers do not provide equal opportunities for every element in the population and the selection of informants is based on the criteria that the informant has published scientific papers in English on accredited journal portals and can provide comprehensive data.

Data collection techniques used are observation, interviews, and literature study. Interviews are conducted with in-depth interview techniques to extract information from informants in depth using interview instruments that allow the expansion of questions if

needed. Then a literature study is carried out on various previous scientific works related to this research topic to strengthen or complement the interview results. Furthermore, all data are analyzed by reduction techniques, data presentation, and interpretation. Through this analysis process, the researcher can extract meaningful insights and uncover correlations, differences, gaps, or similarities that contribute to a comprehensive understanding of the core issue.

RESULT AND DISCUSSION

Result

1. Planning Stage for Writing Scientific Papers in English

Based on the obtained information, planning is a very important first stage in writing scientific papers in English. Planning is made in Indonesian to make it easier to understand and implement. Planning is made to assist students as researchers in mapping the steps they will take in research and writing scientific papers. So, careful planning can help students determine the steps that need to be taken in writing scientific papers. By planning systematically, students can avoid mistakes or difficulties that may occur during the research process.

At the planning stage, the first strategy carried out by students as researchers is to determine specific problem issues to be raised as research topics. These topics can be real problems around them or current issues that are interesting to be studied through research activities. This is as expressed by RH:

"*If I first determine the research theme, yes, it can be from the problems around me or issues that are interesting to research*".

Next, things that need to be done are determining the research objectives, designing a conceptual framework, and detailing the research methodology. This process includes designing research procedures and compiling research results to form scientific manuscripts that are ready to be translated into English. Some informants stressed the importance of preparing Indonesian manuscripts that have gone through the editing and revision stages before translation. This is done to avoid translation errors and minimize improvements after the translation process, As revealed by IN:

"*What is done when starting to plan to write scientific papers in English, if I personally am the first time, yes, we must have an article manuscript or scientific paper in Indonesian that has gone through a reviewer or revision process, usually English is later at the end so that later the final revision is usually related to the language only*"

Based on the informant's statement, it can be understood that the translation of scientific papers into English was carried out at the final stage, focusing on the final revision related to language. This approach aims to ensure that the final translation has optimal language accuracy and quality, assuming that the preparation of the manuscript in the original language has reached a high level of maturity.

2. Process of Writing Scientific Papers

In the process of writing scientific papers, some informants argue that the most important thing is to find a journal portal first and then write scientific papers by following the template and style provided by the journal. Some other informants prefer to compile the results of their research first and then make adjustments to the writing format following the rules set by the journal portal. The things that need to be considered in choosing a journal portal that will be used as a place to publish scientific papers are reputation, *focus,* scope, and how the style of the journal is sheathed. This is as stated by MA:

> "The *first strategy applied is to find the journal portal and then determine the scope of research to be carried out, study the style of the journal*".

There are several strategies carried out by informants in dealing with the complexity of writing scientific papers. *First*, create a frame of mind or research *outline* based on the topic or issue to be researched, the frame of mind can be in the form of a *mind map* that describes what important points are needed in research. Among them are what problems you want to solve, what goals you want to achieve from the research, what data is needed, both primary data and secondary data. By knowing these important points, researchers can conclude what methods, and approaches need to be used. After that, researchers can compile research instruments based on what problems they want to answer in the study.

Second, Conduct comprehensive research data collection and manage references that can support the data that has been collected. What is meant by comprehensive data collection is that the data collected on the research topic and the problem to be answered should be comprehensive and in-depth through various data collection techniques. What is meant by managing references is to find and use references to previous scientific papers that are relevant and come from valid and reputable sources. As for facilitating reference management, researchers can use auxiliary software such as *Publish or Perish, Mendeley,* and so on.

Third, make improvements to scientific papers that have been prepared to be of higher quality. After the scientific work is completed, researchers should correct it again in terms of

substance, grammar, or spelling to ensure the text is easy to read and free of errors. Furthermore, make sure the manuscript has a clear structure starting with a strong and interesting introduction, clear research methodology, structured results and discussions, drawing conclusions supporting the findings, and writing citations according to the procedure. Researchers can also collaborate to ask for input from colleagues or lecturers to gain insight from different points of view to strengthen the scientific treasures contained in their scientific work. then a plagiarism test must be carried out to ensure the manuscript of scientific papers does not contain plagiarism. Researchers should be ready to revise repeatedly to ensure that the scientific work produced is good and of good quality.

3. Stage of Translating Scientific Papers into English

The stage of translating scientific papers into English is quite a challenging stage for students who are not native English speakers. Based on the findings, strategies that can be used are: First, increase the practice of translating writing into English and increase the number of English reading or reference sources to improve translation skills and understanding of English sentence structures. Second, ask for feedback or feedback from colleagues, lecturers, or native speakers who are experts in English. Third, take the time to edit and revise the writing carefully so that it can produce scientific work in English that is of substantial and grammatical quality.

In addition, many informants use language translation machines to facilitate the translation process efficiently. However, it should be underlined before translating scientific papers into English, the scientific work should have been checked for grammatical correctness and sentence structure to minimize grammatical errors in translation results. The software that is often used to help students face language barriers is *Google Translate* and *Microsoft Bing translator* for translation, then *Grammarly* to correct and minimize grammatical errors.

Most informants use *Google Translate* help as a tool to translate their scientific papers into English because it is the most familiar application. However, some other informants consider that Microsoft *Bing translator* can provide more relevant and practical translations because it has been integrated with *Microsoft Word* applications. Furthermore, the finished manuscript translated into English is tested again for grammatical validity using the *Grammarly application. Grammarly* is used to correct grammatically incorrect words or phrases. As for getting maximum editing results, informants tend to suggest using the premium version of *Grammarly* because the premium version of this application provides a more complete and perfect service compared to the free one.

Informants share the opinion that to produce quality English-language scientific works it is not enough to use these applications alone. The results of translation using technology certainly have disadvantages and errors. Therefore they still need a consultation with colleagues, lecturers, or people who are experts in English. People who are experts in English are very helpful in compiling scientific papers in English because they can find vocabulary errors, phrases, or grammatical errors that may be missed.

Discussion

Based on the results of qualitative data analysis, it was found that in the planning process of writing scientific papers, students begin with determining specific topics or problem issues. Then the topic is developed in a research plan to the process of preparing research results and becoming a scientific paper manuscript that is ready to be translated into English. These findings fill the gap in research conducted by Widyasari &; Sholihah (2018) which measures the improvement of the quality of student scientific work with the Academic Writing learning strategy, which in the study does not examine how the student's strategy in planning quality scientific paper writing after getting Academic Writing lectures. The planning process carried out by these students is in line with what was conveyed by Zulmiyetri et al. (2020) That in planning the first scientific work is the selection of topics. There are several requirements in choosing a topic including the topic must be worthy of discussion, interesting, well known, not too broad and not too simple, and there are adequate references to previous research. After that, the topic was revealed to be a title and translated into a research *outline*.

There are several strategies used by students during the process of preparing scientific papers so that they can face the complexity of writing and complete it properly and correctly. First, create a frame of mind or *outline* that has a function to detail what steps they must take in the research. Second, collect data thoroughly and in-depth and manage references that can corroborate the data collected. Third, always make improvements by correcting the substance, and grammar, and ensuring scientific work has a clear structure.

The strategies applied by these students are not the stages of writing scientific papers but ways or methods that facilitate them in going through the stages of writing scientific papers and the rules in their preparation. The stages in writing scientific papers are compiling the initial part which generally consists of title pages, abstract pages, introductions, literature

reviews, research methods, results and discussions, and conclusions and suggestions.(Zulmiyetri et al., 2020, pp. 25–27)

The last finding is a strategy for the process of translating scientific papers into English. According to the students who become informants, the scientific work to be translated must have been improved in terms of substance and grammar. This is done with the aim of reducing the number of substance changes that need to be made after the scientific work is translated. Translation can be done independently with your own English skills or you can also use machine translators such as *Microsoft Bing Translator* and *Google Translate* which have their own advantages and disadvantages.

This finding is in accordance with the findings in the research of Zainuddin et al. (2023) which reveals that the use of *Grammarly* can help students find and correct English grammar mistakes in their scientific papers. However, in addition to this, this study revealed that before using the *Grammarly* application, students do translation using their English skills and are assisted by the *Google Translate* application or *Microsoft Bing Translator*. After that, students still have to check the grammatical quality of their scientific work with people who are experts in the language.

CONCLUSION

Based on the results and discussion of this study, it can be concluded that students use various strategies in every stage of writing scientific papers in English. Students carefully plan the preparation of scientific papers until the completion of writing. To overcome the complexity of writing scientific papers they create a frame of mind to determine effective measures. In addition, this study shows that strategies that can be used in dealing with obstacles when translating scientific papers into English are to ensure that there are no errors in substance and grammar before scientific papers are translated, utilizing language editing software, and consulting with English language experts. Thus, the results of this study provide important insights into students' efforts in improving the quality of English-language scientific work. The implications of these findings can help students understand strategies to improve the quality of English-language scientific papers and also help develop more effective teaching methods in supporting students to overcome the challenges of writing English-language scientific papers.

In this study, several shortcomings can be identified by researchers. Among them are limited research time and the focus of research is only to review student strategies in each stage

of writing scientific papers in English. This study did not review other factors that could affect the quality of English-language scientific work. Suggestions for future research can include developing research by expanding the scope of variables, such as involving other aspects of the quality of scientific work and identifying other factors that can affect students' ability to write English-language scientific papers.

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